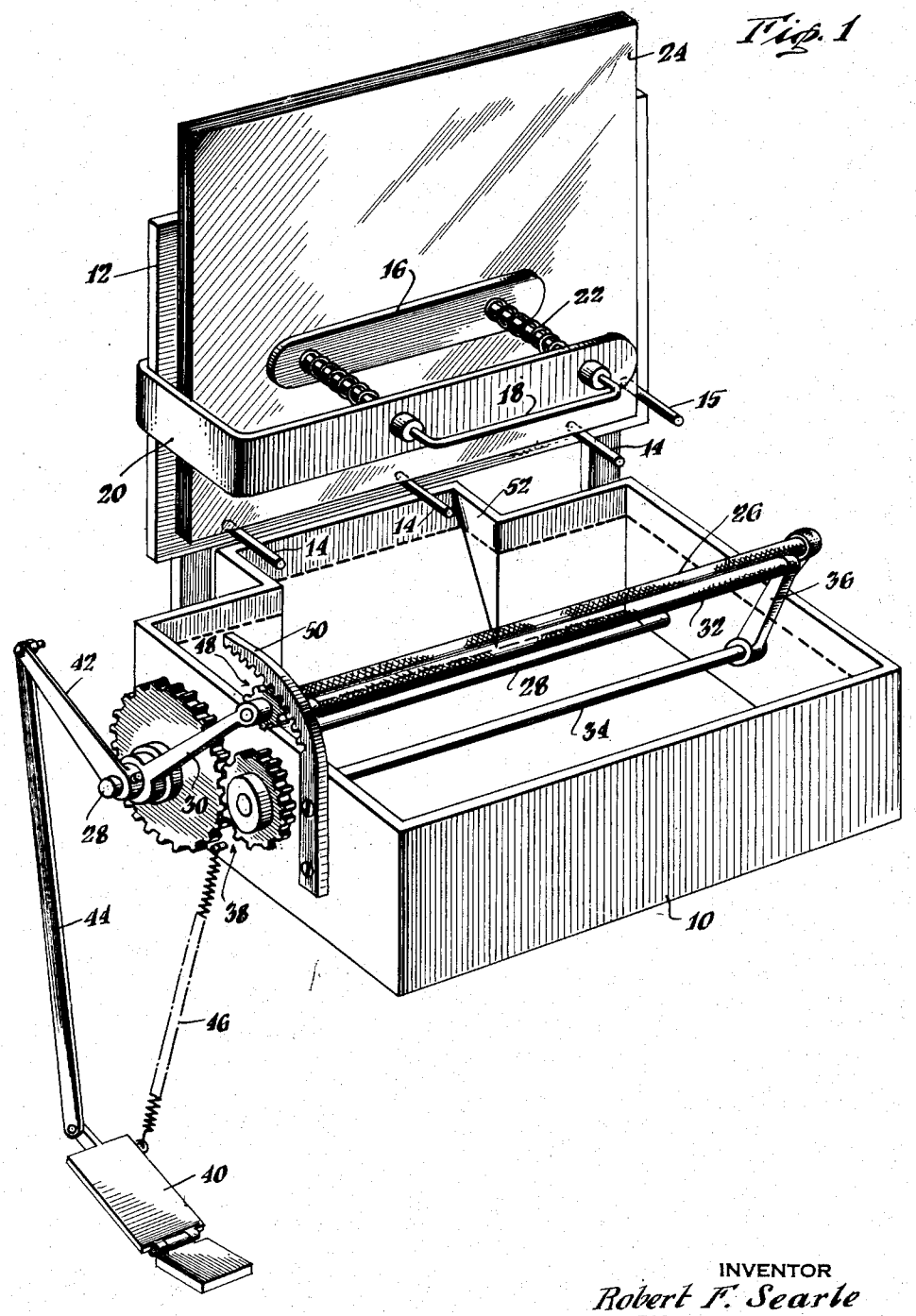
Jan. 12, 1954 R. F. SEARLE 2,665,661

PASTE APPLICATOR FOR PAPER BAG SLEEVES

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Fig. 1



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Fig. 2

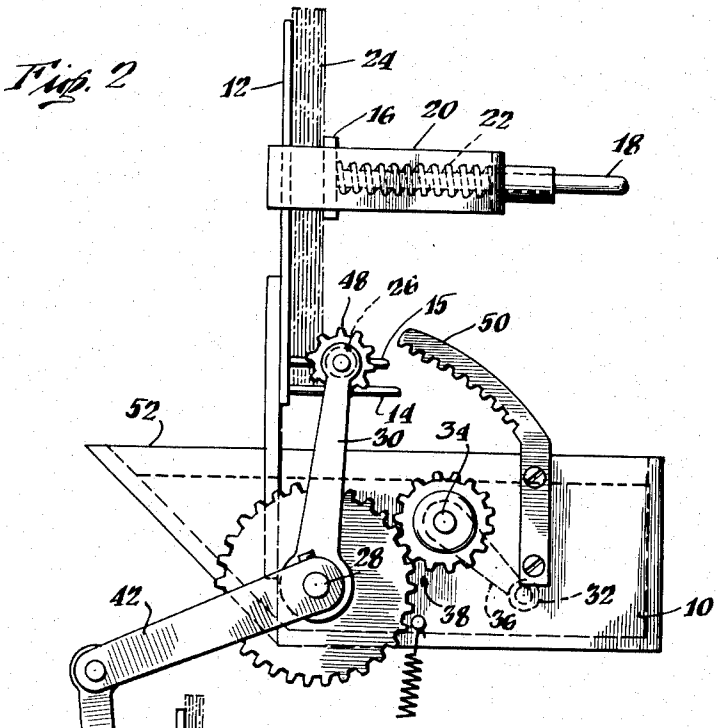
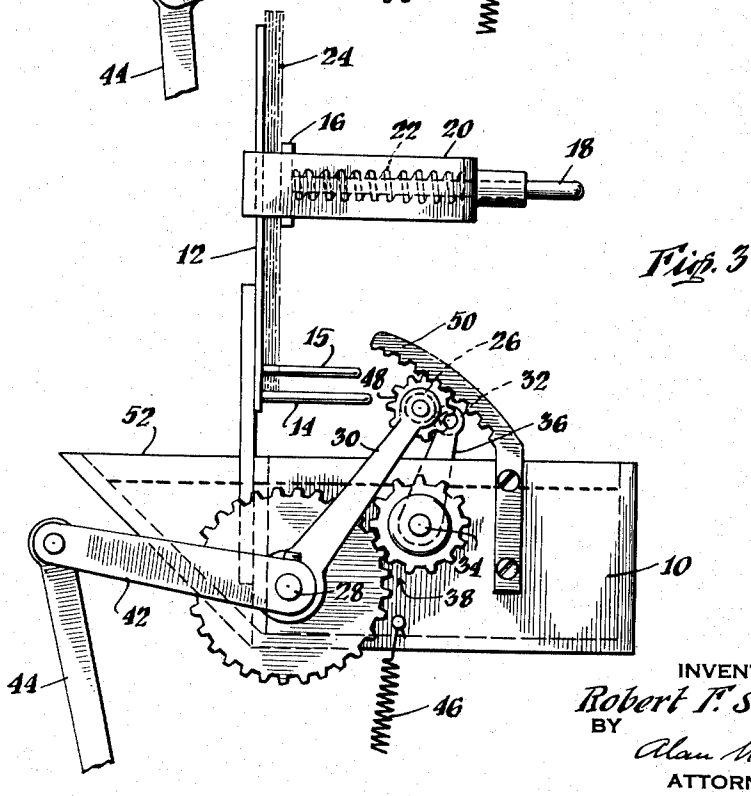


Fig. 3



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Patented Jan. 12, 1954 2,665,661

UNITED STATES PATENT OFFICE

2,665,661

PASTE APPLICATOR FOR PAPER BAG SLEEVES

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Application August 18, 1950, Serial No. 180,133

4 Claims. (Cl. 118—243)

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This invention relates to a paste applicator used in assembling multiwall valve bags of the type having an inserted sleeve such as a so-called "tuck-in sleeve." This machine stamps a line of glue or paste on the sleeve and makes it readily available for insertion into a bag.

The great convenience of my paste applicator is that there is no need for an operator to daub the sleeve with glue before pasting it in a bag. It provides the operator with a supply of sleeves individually and freshly glued when needed with the paste applied in a uniform manner. This uniform application of paste substantially eliminates waste sleeves because each sleeve forms a continuous adhesion with the valve when the operator inserts it into a bag. In addition, only the necessary amount of paste is applied to each sleeve, making my device economical as well as efficient in operation.

Further advantages of this invention can be readily understood by reference to the accompanying drawing in which Fig. 1 is a perspective view of this invention; Fig. 2 is a side view showing the paste applying rod and paste transfer rod in contact with a sleeve and the adhesive respectively and Fig. 3 shows the rods in contact with each other.

Trough 10 carried by a suitable support (not shown) contains the adhesive supply and mounts the various members of this invention. These include a sleeve backing plate 12 with several spaced guide pins 14 positioned along the lower portion of the plate. At its mid-section this plate has a sleeve holding bar 16 mounted by a U-shaped rod 18 and supporting member 20. Springs 22 mounted under tension on the arms of rod 18 tend to force holding bar 16 against the backing plate.

Sleeve 24 consists of a piece of paper or the like precut to a desired form which depends upon the valve bag for which it is intended. By gluing this sleeve to the under inside-edge portion of the V-shaped opening which forms the valve and folding it back over the valve flap, a nozzle is formed by which the bag may be filled and sealed. Perfect sealing can only be achieved if the sleeve forms a continuous adhesion with the valve. In my invention I insure this continuous adhesion by providing for uniform application of the glue. I accomplish this by holding the sleeve in a flat position with bar 16 so that the glue can be readily applied as a continuous strip across the surface of the sleeve.

To position sleeves 24 in readiness for gluing, holding bar 16 is pulled away from backing plate 12 by U-shaped rod 18. A stack of sleeves is then

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placed between the holding bar and backing plate, with their lower edges resting upon guide pins 14. Guide pin 15, located above the main line of pins, in conjunction with supporting member 20 insures positioning of the sleeves against the backing plate. So placed, the sleeves are then held flat against the backing plate and bar 16 is released. Under tension of springs 22 holding bar 16 maintains the sleeves in a perfectly flat and level position for gluing.

To supply the adhesive, I provide a paste applying rod 26 pivotally mounted on shaft 28 by arms 30 and a paste transfer rod 32 which is also pivotally mounted on a shaft 34 by arms 36. These shafts are geared together as indicated at 38 and connected to foot pedal 40 by lever 42 and arm 44 so that as foot pedal 40 is depressed the rods pivot in opposite directions until the paste applying rod stamps against the lower edge of sleeve 24 which is supported by backing plate 12. By this time paste transfer rod 32 has pivoted into the adhesive (see Fig. 2). The rods are so mounted that as pressure on the foot pedal is released, spring 46 pulls them into contact with each other transferring fresh paste or glue from rod 32 to rod 26 (see Fig. 3). For this purpose, I prefer to use knurled rods as shown which help to make the exchange of glue more positive.

To insure the application of fresh adhesive to each sleeve I provide a small gear 48 mounted on one end of rod 26 and a gear segment 50 positioned to mesh with gear 48. These gears are adapted to roll rod 26 over as it pivots away from rod 32 so that freshly transferred glue contacts each sleeve.

While other means may be used for transferring glue to rod 26 I prefer a pair of rods as described with each rod pivoting only one-half the total distance between the glue supply and the sleeve so as to increase the speed of operation. Obviously the width of the glue strip may be varied by changing rod diameters and only the necessary amount of glue for the particular purpose at hand need be used. In the preferred form of my invention shown, I provide the rear wall of trough 10 with a filling pan 52 so that the machine may be conveniently refilled while in operation.

With this construction, manual handling of the sleeves is materially reduced because as many as from twenty-five to fifty sleeves may be easily placed behind holding bar 16 in readiness for gluing. They are automatically positioned by guide pins 14 so that the line of adhesive is uniformly spaced from the bottom edge of each

sleeve. This uniformity enables the operator to quickly and accurately position the sleeve in a bag which tends to increase his production rate.

Thus by the simple expedient of depressing a foot pedal my paste applicator makes a freshly glued sleeve readily available for the operator to insert into a bag.

It will be understood that it is intended to cover all changes and modifications of the preferred embodiment of the invention herein chosen for the purpose of illustration which do not constitute departures from the spirit and scope of the invention.

What I claim is:

1. A machine for applying adhesive to a sheet of material for forming a sleeve in the valve of a multiwall paper bag comprising, a trough to hold the adhesive, a plate mounted on one side of said trough, means for holding a sheet of sleeve-forming material against said plate, a pair of rods pivotally mounted in said trough, means for swinging said rods into contact with each other above said adhesive to transfer a substantially continuous line of adhesive between the rods, said swinging means being adapted to swing said rods out of contact with each other to move one rod into the adhesive and to positively force the second rod against said sleeve-forming material to stamp a continuous line of adhesive across the material.

2. A structure as specified in claim 1 in which the rods have knurled surfaces to insure transfer of adhesive.

3. A structure as specified in claim 1 including means for rolling said second rod over as it moves toward said sleeve-forming material so as to stamp a continuous line of freshly transferred adhesive upon the material.

4. A machine for applying adhesive to a sheet of material for forming a sleeve in the valve of a multiwall paper bag comprising a trough to hold adhesive for application to said material, a plate mounted on one side of said trough, means for holding a sheet of sleeve forming material against said plate, a rod pivotally mounted on the trough, means positioned in said trough for supplying a continuous line of adhesive along substantially the entire length of the rod but only on a minor portion of the surface of said rod and on the side removed from said plate, means for swinging said rod between said adhesive supplying means and sleeve-forming material and for positively forcing said rod against the said adhesive supplying means and material on the plate, and means for rolling said rod over as it moves from the adhesive supplying means to bring the side of the rod which has the adhesive into contact with the material so as to stamp a continuous line of freshly transferred adhesive across the material.

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